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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,721

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Richard Martin

EXS-402US

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7590

07/31/2009

MCDONNELL BOEHNEN HULBERT @ BERGHOFF LLP
300 SOUTH WACKER DRIVE
SUITE 3100
CHICAGO, IL 60606

EXAMINER

TRUONG, TAMTHOM NGO

ART UNIT

PAPER NUMBER

1624

MAIL DATE

DELIVERY MODE

07/31/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,721	Applicant(s) MARTIN ET AL.	
	Examiner TAMTHOM N. TRUONG	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) 15-21, 56, 58, 62, 64, 69, 71 and 84-98 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-7, 10, 11, 28, 30, 31, 33, 34, 36, 37, 39, 50, 99, 100 and 101 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 3-7,10,11,15-21,28,30,31,33,34,36,37,39,50,56,58,62,64,69,71 and 84-101.

NON-FINAL ACTION

Applicant's amendment of 4-8-09 has been fully considered. The amended claims have overcome the previous 102 rejection by deleting “-NR²⁴COR²⁶” from the definition of R^{5a}.

Thus, said rejection is now withdrawn. However, the generic teaching of **Baxter et. al.** (US 6,545,005 B1) still render obvious the scope of formula III. Thus, a new ground of rejection is presented herein.

Claims 1, 2, 8, 9, 12-14, 22-27, 29, 32, 35, 38, 40-49, 51-55, 57, 59-61, 63, 65-68, 70, 72-83, and 102-105 are cancelled.

Claims 15-21, 56, 58, 62, 64, 69, 71, and 84-98 are withdrawn as being drawn to non-elected subject matter.

Claims 3-7, 10, 11, 15-21, 28, 30, 31, 33, 34, 36, 37, 39, 50, 56, 58, 62, 64, 69, 71, 99, 100, and 101 are pending.

Claim Rejections - 35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 5 recites species that are outside the scope of formula III of claim 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 3-7, 10, 11, 28, 30, 31, 33, 34, 36, 37, 39, 50, 99, 100 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Baxter et. al.** (US'005 B1). Although claim 3 has been amended to exclude compound #14, the generic teaching of formula II still encompasses the instant formula III when the disclosed formula II (in column 31) has the following substituents:

- i. R₁ is an aryl group;
- ii. R₂ is an alkyl or aryl group;
- iii. L is absent or $-(CH_2)_nNR_2(CH_2)_p-$;

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- iv. $n = 0$; $p = 0$;
- v. X is a direct bond;
- vi. Y is $-S(O_2)-$; Z is a direct bond;
- vii. W is substituted or unsubstituted aryl fused to the pyrimidone ring.

Although the reference does not disclose additional species of a sulfonamide substituent at the 2-position, the subgenus formula II in column 31 provides equivalency teaching for one skilled in the art to select compounds of the instant formula III to agonize or antagonize hedgehog pathway.

In view of the recent ruling in KSR, the court determines obviousness based on what a skilled artisan would have known at the time of the invention, and on what such a person would have reasonably expected to have been able to do in view of that knowledge (*KSR, 82 USPQ 2d, 1385*). In other words, the decision in KSR forecloses the argument that a **specific** teaching, suggestion, or motivation is required to support a finding of obviousness.

Thus, at the time of the invention, it would have been obvious to make and use compounds of the instant formula III in view of the teaching above.

3. **Non-elected subject matter:** This application contains claims 15-21, 56, 58, 62, 64, 69, 71, and 84-98 drawn to an invention nonelected with traverse in the reply filed on 8-6-08. A complete reply to this rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMTHOM N. TRUONG whose telephone number is (571)272-0676. The examiner can normally be reached on M, T and Th (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

***/Tamthom N. Truong/
Patent Examiner, Art Unit 1624***

***/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624***

6-22-09